

ABSTRAK

Amalina Elvira Anggraini, G0014023, 2017. Efek Ekstrak Etanol Daun Dadap Serep (*Erythrina lithosperma* Miq.) terhadap Larva Nyamuk *Aedes aegypti* [L.]. Skripsi. Fakultas Kedokteran, Universitas Sebelas Maret, Surakarta.

Latar Belakang: Pemberantasan nyamuk *Aedes aegypti* [L.] yang merupakan vektor penyakit demam berdarah dengue, chikungunya, dan zika telah banyak dilakukan salah satunya dengan menggunakan temephos 1%. Namun, penggunaan temephos 1% ini telah menimbulkan resistensi di beberapa kota di Indonesia, khususnya Jawa Tengah. Oleh karena itu, perlu dilakukan penelitian untuk mencari larvasida alami salah satunya dengan daun dadap serep (*Erythrina lithosperma* Miq.) yang mengandung flavonoid, saponin, dan tanin. Penelitian ini bertujuan untuk melihat apakah ekstrak etanol daun dadap serep (*Erythrina lithosperma* Miq.) memiliki efek mortalitas terhadap larva nyamuk *Aedes aegypti* [L.].

Metode Penelitian: Jenis penelitian adalah quasi ekperimental laboratorium dengan rancangan *post test only controlled group design*. Obyek penelitian adalah larva *Aedes aegypti* [L.] yang dibagi menjadi 6 kelompok, masing-masing berisi 25 larva nyamuk dan dilakukan pengulangan 4 kali. Kelompok kontrol negatif menggunakan 100 ml akuades. Enam kelompok lainnya diberi ekstrak etanol daun dadap serep yang terdiri dari 0,3%; 0,5%; 0,7%; 0,9%; dan 1,1%. Pengamatan dilakukan dalam 24 jam kemudian dihitung jumlah larva nyamuk yang mati. Data diuji menggunakan Regresi Linear dan Regresi Probit.

Hasil Penelitian: Uji Regresi Linear menunjukkan bahwa kenaikan ekstrak etanol daun Dadap Serep (*Erythrina lithosperma* Miq.) mempengaruhi kenaikan mortalitas larva *Aedes aegypti* [L.] berdasarkan rumus $Y=0,024 + 0,956X$. Nilai korelasi R sebesar 0,994 serta R^2 sebesar 0,968 yang berarti persentase pengaruh variabel ekstrak etanol daun dadap serep terhadap mortalitas larva sebesar 96,8% dan sisanya 3,2% dipengaruhi variabel lain. Regresi Probit menunjukkan LC_{50} pada 0,492% dan LC_{99} pada 1,107%.

Simpulan Penelitian: Ekstrak etanol daun dadap serep (*Erythrina lithosperma* Miq.) memiliki efek mortalitas terhadap larva *Aedes aegypti* [L.]. LC_{50} sebesar 0,492% dan LC_{99} sebesar 1,107%.

Kata Kunci: daun dadap serep (*Erythrina lithosperma* Miq.), larva *Aedes aegypti* [L.], mortalitas

ABSTRACT

Amalina Elvira Anggraini, G0014023, 2017. *The Effect of Ethanol Extract of Dadap Serep (Erythrina lithosperma Miq.) to Mortality of Aedes aegypti [L.] Larvae.* Thesis. Faculty of Medicine, Sebelas Maret University, Surakarta.

Background: Many ways have been done to kill *Aedes aegypti* [L.], species that caused dengue fever, chikungunya, and zika, one of them was temephos 1%. Unfortunately, some studies mentioned that the use of temephos 1% have made resistance in some cities in Indonesia, especially Central Java. Thus, it was really needed to do a research aimed to find natural larvacide made from natural resources, such as dadap serep (*Erythrina lithosperma* Miq.) that contains Flavonoid, Saponin, and Tannin inside. This research aimed to know whether the ethanol extract of dadap serep (*Erythrina lithosperma* Miq.) had mortality effect to *Aedes Aegypti* [L.] larvae.

Methods: This research used a laboratory quasi experimental design with post test only controlled group design. The subject of this research was *Aedes aegypti* [L.] that was divided into 6 groups, each group contained 25 larvae and repeated 4 times. For the negative control group we used 100 ml of aquadest only. The other five groups contained different number of ethanol extract of dadap serep. There are 0,3%; 0,5%; 0,7%; 0,9%; and 1,1%. The observation was done after 24 hours and the number of dead larvae was counted. Data analyzed by Linear Regression and Probit Regression.

Result: Linear Regression test showed that increasing of the ethanol extract of Dadap Serep affected to the increasing of *Aedes aegypti* [L.] mortality based on $Y=0,024 + 0,956X$ formula. The R correlation was 0,968 and R^2 score was 0,968 meant that percentage of ethanol extract of dadap serep (*Erythrina lithosperma* Miq.) to kill larvae was 96,8% and the rest 3,2% was affected by other variables. Probit Regression test showed LC_{50} was 0,492% and LC_{99} was 1,107%.

Conclusion: Ethanol extract of dadap serep (*Erythrina lithosperma* Miq.) affect to the mortality of *Aedes aegypti* [L.] paralleled to the increasing of ethanol extract. LC_{50} is 0,492% and the LC_{99} is 1,107%.

Keywords: ethanol extract of dadap serep (*Erythrina lithosperma* Miq.), *Aedes aegypti* [L.] larvae, mortality.